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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,094	03/19/2004	William S. Sykes	32063.00.0002	7705
30011	7590	12/21/2005	EXAMINER	
LIEBERMAN & BRANDSDORFER, LLC 802 STILL CREEK LANE GAITHERSBURG, MD 20878			KASTLER, SCOTT R	
			ART UNIT	PAPER NUMBER
			1742	

DATE MAILED: 12/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/805,094

Applicant(s)

SYKES, WILLIAM S.

Examiner

Scott Kastler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23,27-31 and 34-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23,27-31 and 34-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 23 and 37-40 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification, as originally filed does not support the limitation that the combustible gas be delivered either at a rate of at least 15 psi or between 15 and 80 psi (the specification recites only delivering propane or chemtane at between 35 and 80 psi, see page 5 of the specification for example).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 23, and 35 and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith in view of Jenkins. Smith teaches a metal cutting apparatus and method of metal

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cutting including a cutting torch (B), both a preheating mixture of oxygen and combustible gas at any desired pressure (see page 2 lines 70-74 for example) and a source of liquid oxygen for cutting the metal (through line 16), where the liquid oxygen is supplied at between 150 and 220 psi (see the table at page 3 for example, which teaches supplying the cutting oxygen at 174 psi) and including a heater (28) and insulated line (17, 16) which would ensure that the liquid oxygen does not freeze in the hose (16) and regulators (14 and 15) thereby showing all aspects of the above claims except the use of a two part cutting torch tip, although such a tip would be allowed by the broad disclosure of Smith. Jenkins teaches that at the time the invention was made, two port tips for cutting torches supplying both oxygen and a combustible gas (see page 1, column 2, lines 43-55 for example) for cutting metal workpieces were known in the art and provide improved cutting properties when compared to other types of cutting tips (see page 1 column 1, lines 45-55 for example). Because improved cutting properties would also be desired by Smith, which allows for the use of any desired type of cutting tip, motivation to employ the improved tip taught by Jenkins, as the cutting tip (B) required by Smith, would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

Claims 23, and 35 and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lotz et al in view of Jenkins. Lotz et al teaches a metal cutting apparatus and method of metal cutting including a cutting torch (5,6), both a preheating mixture of oxygen and combustible gas at any desired pressure(see the embodiment of figure 1 for example) and a source of liquid oxygen for cutting the metal (1), where the liquid oxygen is supplied at between 150 and 220 psi (see the table 1 at col. 3 for example) and including a heater (2) which would ensure that the liquid oxygen does not freeze in the hose and regulators (3, 4) thereby showing

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all aspects of the above claims thereby showing all aspects of the above claims except the use of a two part cutting torch. Jenkins teaches that at the time the invention was made, two port tips for cutting torches supplying both oxygen and a combustible gas (see page 1, column 2, lines 43-55 for example) for cutting metal workpieces were known in the art and provide improved cutting properties when compared to other types of cutting tips (see page 1 column 1, lines 45-55 for example). Because improved cutting properties would also be desired by Lotz et al, which allows for the use of any desired type of cutting tip, motivation to employ the improved tip taught by Jenkins, as the cutting tip (5,6) required by Lotz et al, would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Babcock in view of Jenkins. Babcock teaches a metal cutting apparatus and method of metal cutting including a cutting torch (see the embodiments of figures 3 and 4 for example), including both a preheating mixture of oxygen and combustible gas (from lines 34 and 38 example) and a source of liquid oxygen for cutting the metal (through line 32), where the liquid oxygen is supplied through hose 21 and including a heater (19, 20) which would ensure that the liquid oxygen does not freeze in the hose (21) and regulator (17, 18) thereby showing all aspects of the above claims except the use of a two part cutting torch tip. Jenkins teaches that at the time the invention was made, two port tips for cutting torches supplying both oxygen and a combustible gas (see page 1, column 2, lines 43-55 for example) for cutting metal workpieces were known in the art and provide improved cutting properties when compared to other types of cutting tips (see page 1 column 1, lines 45-55 for example). Because improved cutting properties would also be desired by Babcock, which allows for the use of any desired type of cutting tip, motivation to employ the

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improved tip taught by Jenkins, as the cutting tip required by Babcock, would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

Claims 23, 27-30, 34, 35 and 37-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith or Lotz et al in view of Jenkins as applied to claim 23 above, further in view of Pearl II et al. As applied to claim 23 above, either of Smith or Lotz et al in view of Jenkins show all aspects of the above claims except the specific use of either propane or propylene as the combustion gas, although both of Smith (see page 2, lines 70-75) Lotz et al (the heating gas) allow for the use of any desired combustible gas. Pearl II et al at col. 4 lines 58-65 for example, teach that both propane and propylene were well known combustion gases at the time the invention was made. Because neither of Smith or Lotz et al require any specific combustion gas, motivation to employ any equivalent well known combustion gas, including either propane or propylene as taught by Pearl II et al, as the combustion, or heating gas required by either of Smith or Lotz et al, would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hughey in view of either of Smith or Lotz et al and further in view of Jenkins and Pearl II et al. Hughey teaches a method and apparatus for cutting metal, where the cutting speed, and thereby the torch movement speed may be at any desired rate, depending upon the depth of the cut that is desired, thereby showing all aspects of the above claims except the use of a liquid oxygen supplied cutting torch and pre-heating arrangement as recited in the above claims. As applied to claim 23 above, both of Smith and Lotz et al in view of Jenkins and Pearl II et al teach improved cutting

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torches employing liquid oxygen sources and pre-heating arrangements meeting the requirements of the above claims, and which allow for faster cutting speeds. Because faster cutting speeds are also desired by Hughey, and Hughey recites the general use of an oxygen cutting torch, motivation to employ the liquid oxygen cutting arrangements of either of Smith or Lotz et al in view of Jenkins and Pearl II et al, as the recited oxygen torch of Hughey et al, in order to attain the higher cutting speeds afforded by either of Smith or Lotz et al in view of Jenkins and Pearl II et al, would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

Response to Arguments

Applicant's arguments filed on 11/2/2005 have been fully considered but they are not persuasive. Applicant's arguments that none of the applied prior art shows or fairly suggests supplying the combustible gas at between 15 and 80 psi is not persuasive because firstly, as recited above, the specification as originally filed does not support this limitation. Secondly, all of the applied art allows for the use of any desired combustible gas pressure including those recited. Applicant's further argument that the applied prior art would not employ combustible gas pressures above 15 psi because acetylene becomes unstable above this pressure is not persuasive because none of the applied prior art is limited to acetylene, and in fact, Pearl II et al specifically recites the use of non-acetylene combustible gases. Finally, applicant's arguments regarding the combustible gas delivery pressure are moot with respect to instant claims 27-31, 34, 41 and 42 since this limitation does not appear in these claims.

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Applicant's further argument that Pearl II et al cannot serve as a proper reference since it does not teach the cutting of metal is not persuasive. As stated in the above rejection, Pearl II is cited to recite known combustion gases for use in torches in general, including metal cutting torches.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

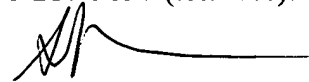
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Kastler whose telephone number is (571) 272-1243. The examiner can normally be reached on Monday through Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Scott Kastler
Primary Examiner
Art Unit 1742

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